

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in this application. Added text is indicated by underlining, and deleted text is indicated by ~~striketrough~~. Changes are identified by a vertical bar in the margin.

Listing of Claims:

- 1 1. (canceled)
- 1 2. (canceled)
- 1 3. (canceled)
- 1 4. (currently amended) A method of authenticating disk management
2 | information according to claim ~~3~~ 5, comprising the steps of:
3 sequentially and additionally recording authentication information and
4 invalidating information in the power calibration area on the disk;
5 regarding the management information on the disk as valid if invalidating
6 information is absent after authentication information last recorded on the disk; and
7 regarding the management information on the disk as invalid if invalidating
8 information is present after authentication information last recorded on the disk.
- 1 5. (currently amended) A method of authenticating disk management
2 | information ~~according to claim 3 wherein~~ of a disk using a disk device to certify validity of
3 management information recorded on the disk comprising the steps of:
4 recording authentication information on the disk on which the management
5 information is recorded, thereby certifying that the management information is valid;
6 recording invalidating information on the disk on which the management
7 information and the authentication information are recorded, thereby invalidating certifying

8 effect of the authentication information, the step of recording invalidating information being
9 performed during startup processing by the disk device;
10 recording, during stopping processing of a disk device in which the disk is loaded,
11 authentication information in a power calibration area on the disk if validity of the management
12 information is confirmed, wherein
13 the ~~invalidation~~ invalidating information uses a power calibration pattern recorded
14 in the power calibration area, and if the last recorded calibration pattern is a test pattern, then the
15 disk management information is deemed to be invalid.

1 6. (currently amended) A disk device according to claim 9, comprising:
2 means for recording authentication information in a power calibration area on a
3 disk to certify validity of management information in a recording management area on the disk
4 and invalidating information to invalidate certifying effect of the authentication information, in
5 the power calibration area on the disk on which the management information is recorded; and
6 means for determining whether or not the management information on the disk is
7 valid by confirming the authentication information and the invalidating information on the disk.

1 7. (Previously presented) A disk device according to claim 6, wherein:
2 the authentication information is recorded during the time that stopping
3 processing of the disk device is being performed, if validity of the management information is
4 confirmed; and
5 the invalidating information is recorded, before data recording processing, in
6 response to a data recording request first received after the disk device is started.

1 8. (currently amended) A method of authenticating disk management
2 information according to claim 3 5, wherein the authentication information is a copy of the disk
3 management information, and if the information last recorded in the power calibration area is the
4 same as the disk management information, then the disk management information is deemed to
5 be valid.

1 9. (new) A disk device comprising:
2 a disk;
3 means for recording authentication information on the disk on which the
4 management information is recorded, thereby certifying that the management information is
5 valid;
6 means for recording invalidating information on the disk on which the
7 management information and the authentication information are recorded, thereby invalidating
8 certifying effect of the authentication information, wherein the recording of invalidating
9 information is performed during startup processing by the disk device;
10 means for recording, during stopping processing of a disk device in which the
11 disk is loaded, authentication information in a power calibration area on the disk if validity of the
12 management information is confirmed, wherein the invalidating information uses a power
13 calibration pattern recorded in the power calibration area, and if the last recorded calibration
14 pattern is a test pattern, then the disk management information is deemed to be invalid.